1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--TWO TYPES OF METASOMATITES IN THE ORE BEARING FRACTURE ZONE IN A
RARE METAL DEPOSIT -U-

AUTHOR--STRELKINA, YE.M.

5

COUNTRY OF INFO--USSR

SOURCE--SOV. GEOL. 1970, 13(2) 127-34

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOCHEMISTRY, ORE, MINERAL DEPOSIT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/1713 STEP NO--UR/0215/70/013/002/0127/0134

CIRC ACCESSION NO--AP0108082
UNCLASSIFIED
ZZZZZZZZZZZZ

CIRC ACCESSION NO--AP0108082

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO TYPES OF METASOMATITES DEVELOPED WITHIN A SINGLE ORE BEARING ZONE: EARLY QUARTZ ORTHOCLASE AND LATE QUARTZ ANKERITE. THE DEPOSIT IS SITUATED IN ARCHEAN GRANITE GNEISSES PREDOMINANTLY OF PLAGIOCLASE AMPHIBOLE COMPN. THE INTRUSIVE MASSIFS OF ALK. AND SUBALK. COMPNS. WERE FORMED DURING MESOZOIC TECTONIC MAGMATIC CYCLE. THE RARE METAL MINERALIZATION WAS LOCALIZED TO THE ZONE OF A FRACTURE HEALED BY BLASTOMYLONITES. THE METASOMATISM, RELATED TO MESOZOIC HYDROTHERMAL ACTIVITY, OCCURRED MOSTLY IN BLASTOMYLONITE ZONES OF THE FRACTURE AND PARTLY IN GRANITE GNEISSES. THE METASOMATITES WERE FORMED DURING 2 STAGES. THE EARLY QUARTZ ORTHOCLASE METASOMATITES ARE THE HIGHEST TEMP. FACIES OF QUARTZ FELDSPAR FORMATION. THEY FORMED DURING THE 1ST STAGE TOGETHER WITH MICROSCOPIC VEINLETS OF ORTHOCLASE, QUARTZ, AND PYRITE WITH RUTILE. THE NEAR ORE QUARTZ ANKERITE METASOMATITES, ACCOMPANIED BY ORE ACCUMULATIONS, WERE FORMED DURING THE 2ND STAGE. METASOMATIC HYDROTHERMAL ALTERATION OF BLASTOMYLONITES WAS ACCOMPANIED BY REGULAR CHANGES OF PARAGENETIC ASSOCNS. IN SPACE EFFECTING THE ZONING IN THE STRUCTURE OF METASOMATITES. THREE ZONES (EXTERNAL, INTERMEDIATE, AND INTERNAL) WERE SEPD. IN QUARTZ ORTHOCLASE METASOMATITES AND 2 ZONES (EXTERNAL AND INTERNAL) IN QUARTZ ANKERITE METASOMATITES. THE PARAGENESIS OF ZONES IN QUARTZ ORTHOCLASE AND QUARTZ ANKERITE METASOMATITES INDICATED THAT QUARTZ ORTHOCLASES WERE FORMED FROM MORE ACIDIC SOLNS. THAN THOSE WHICH GENERATED QUARTZ ANKERITES.

UDC: 8.74

USSR

STRELKO, R. S.

[redacted]

"Program for Realization of a 178-Sector Dynamic Model (in M-220 Computer Language)"

V sb. Algoritmy i programmy realizatsii narodnokhoz. modeley (Algorithms and Programs for Realization of National Economic Models--collection of works), Novosibirsk, 1971, pp 31-74 (from RZh-Kibernetika, No 5, May 72, Abstract No 5V529)

[No abstract]

1/1

UDC: 8.74

USSR

ITSKOVICH, I. A., STRELKO, R. S. (editors)

"Algorithms and Programs for Realization of National Economic Models"

Algoritmy i programmy realizatsii narodnokhozyaystvennykh modeley. AN SSSR. Sib. otd. In-t ekon. i organiz. prom. proiz-va. M-vo priborostr. sredstv avtomatiz. i sistem upr. NII avtomatizir. sistem planir. i upr. (cf. English above. Academy of Sciences of the USSR. Siberian Department. Institute of Economics and Organization of Industrial Production. Ministry of Instrument Building of Means of Automation and Control Systems. Scientific Research Institute of Automated Planning and Control Systems), Novosibirsk, 1971, 150 pp, ill. 59 k. (from RZh-Kibernetika, No 5, May 72, Abstract No 5V531K)

Translation: Articles are abstracted separately.

1/1

STRELKO, V. V.

Life Support System

So: JPRS 53801
12 Aug 71

UDC 613.693:629.7.048.4:612.223.11]:661.183.124

AMINOSILICAGELS: REGENERABLE SORBENTS FOR ABSORBING CARBON HYDROGEN SULFIDE AND WATER VAPOR

[Article by I. A. Danilychev, V. V. Strelko, T. N. Burushkina, V. K. Cherkasov, B. L., Avetisyants, and Ye. N. Mozzhukhova; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 5, No 3, 1971, pp 77-79, submitted 24 February 1969]

One of the principal requirements imposed on atmospheric purification systems in spaceships is the capacity for effectively absorbing carbon dioxide exhaled by man. The carbon dioxide adsorbents used are unregenerable chemical adsorbents of the type of different peroxide compounds of alkali metals and regenerable sorbents: synthetic zeolites (N. S. Torocheshnikov, et al.; Seylis and Beumont).

Although a system for air purification based on synthetic zeolites has been well developed, it has a number of serious inadequacies. In particular, the use of zeolites makes it necessary to use preliminary air drying to the dew point: 60-70°; considerable energy expenditures are required for the thermovacuum regeneration of synthetic zeolites.

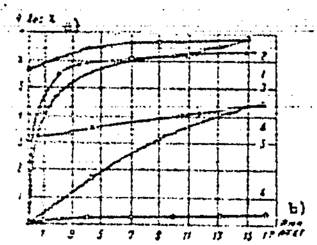

Fig. 1. Isotherms of CO_2 and H_2S adsorption and desorption on aminosilicagel. 1) isotherm of CO_2 adsorption; 2) isotherm of CO_2 desorption; 3) isotherm of CO_2 adsorption in presence of water vapor; 4) isotherm of CO_2 adsorption in control sample; 5) isotherm of H_2S in presence of water vapor; 6) isotherm of H_2S desorption. a) % by weight; b) P mm Hg.

1/2 028 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--POLYMERIZATION MECHANISM OF SILICIC ACIDS -U-

AUTHOR--STRELKO, V.V.

S

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 430-436

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMERIZATION, CHEMICAL REACTION MECHANISM, CHEMICAL BONDING,
SILOXANE, INORGANIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2147 STEP NO--UR/0069/70/032/003/0430/0436

CIRC ACCESSION NO--AP0125730

UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125730

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DONOR ACCEPTOR PROPERTIES OF SILICIC ACIDS HAVE BEEN CONSIDERED AND A MECHANISM SUGGESTED OF THEIR POLYMERIZATION IN ALKALINE AND ACID SOLUTIONS, WHICH IS A BIMOLECULAR NUCLEOPHILIC SUBSTITUTION REACTION S SUBN2, AS WELL AS A MECHANISM OF THE FORMATION OF NEW SILOXANE BONDS DURING GELS AGEING AND DURING THEIR SURFACE TREATMENT WITH SILANES. FACILITY: INSTITUT FIZICHESKOY KHIMII AN USSR, KIEV.

UNCLASSIFIED

USSR UDC 621.373.826:53

STRELKOV, G. M.

"The Problem of Laser Radiation Attenuation in Aqueous Aerosol"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses--collection of works) "Nauka," 1972, pp 132-134 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10D369)

Translation: The time change of the laser beam attenuation coefficient α is considered in the vaporization process of aqueous aerosol under the action of the laser. Bibliography of three. A. L.

1/1

USSR

KUZNETSOV, Yu. D., STRELKOV, G. P., SMOLYANINOV, Yu. M.

"Endurance of Reinforced Concrete Elements with Symmetrical, Low-Frequency Bending"

Raschet. Konstruktsiy Silos. Sooruzh. [Design of Silo Structures -- Collection of Works], Kiev, Budivel'nik Press, 1972, pp 55-66, (Translated from Referativnyy Zhurnal, Mekhanika, No 10, 1972, Abstract No 10 V1026, by the author's).

Translation: The process of rupture of reinforced concrete bent elements under sign-changing loads in a symmetrical cycle is studied with low frequencies (0.015 and 0.020 Hz) and fixed amplitudes of deformations and stresses. A unique form of rupture of these elements is discovered, requiring new theoretical concepts for its explanation. In particular, the creep theory of concrete is required. The dependence of endurance on frequency is established, decreasing with increasing period of oscillations. An experimental installation and methods of performing experiments are described. The analysis of norm documents and literature data presented in the work confirms the necessity of refining a number of coefficients used to design the structures for sign-changing loads. The results of the work can be used to calculate structures subjected to variable loadings at low frequencies, such as the supports of rotating furnaces, silo walls, etc. The work con-

USSR

KUZNETSOV, Yu. D., STRELKOV, G. P., SMOLYANINOV, Yu. M., Raschet. Konstruktsiy Silos. Sooruzh., Kiev, Budivel'nik Press, 1972, pp 55-66.

tains recommendations for values of coefficients for reduction of calculated strengths for structures used under these conditions. 16 Biblio. Refs.

2/2

USSR

UDC 546.791.4'21:542.61

FILIPPOV, A. P., and STRELKOV, L. A.

"Kinetics of the Solution of Uranium Dioxide in the Solutions of Nitric Acid Solvates"

Leningrad, Radiokhimiya, Vol 15, No 2, 1973, pp 186-194

Abstract: The kinetics of the solution of uranium dioxide in nitric acid solutions with TBF, D2EGFK, and TOA nitrate was investigated by the method of rotating disk. The relationship between the physico-chemical processes of the solutions of nitric acid in TBF, D2EGFK, TOA and their composition has been established, the constants of the formation and the concentration of HNO_3 solvates in the organic phase have been calculated. It has been shown that the most important factor of the solution in nitric acid solvates is the presence of the solvate with two molecules of HNO_3 in the organic solution. It has been shown that in the diffusional area of the process ($\omega < 500$ rpm) the limiting stage is the diffusion of the reaction products; in the kinetic area the limiting factors are the stages of the decomposition of nitric acid ($t = -16$ -- $0^{\circ}C$) and oxidation of the uranium ($t = 0$ -- $50^{\circ}C$).

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Radiation Chemistry

USSR UDC: (542.61+542.93):546.791

STRELKOV, L. A., FILIPPOV, A. P.

"Investigation of Processes of Oxidation and Dissolution of Uranium Compounds in Anhydrous Media. IV. Dissolution of UO_2 in the Trioctylamine-Nitric Acid System"

Leningrad, Radiokhimiya, Vol 14, No 3, 1972, pp 487-488

Abstract: The paper presents the results of research on dissolution of UO_2 in the trioctylamine-HNO_3 system (in xylene). It was found that the highest oxidative capacity is shown by nitric acid in the low-stability solvate trioctylamine·HNO_3.2HNO_3·H_2O. Dissolution of this solvate frees undissociated nitric acid molecules which then act as an oxidant for hexavalent uranium.

USSR UDC 546.791:54 - 145.4

STRELKOV, L. A., and FILIPPOV, A. P.

"Study of the Oxidation and Dissolution Processes of Uranium Compounds in Non-aqueous Media. II. Effect of the State of Nitric Acid in the System TBF-HNO_3 on the Oxidation and Solution Process of UO_2"

Leningrad, Radiokhimiya, Vol 13, No 1, 1971, pp 58-62

Abstract: Using the system TBF-HNO_3 (in octane), oxidation-reduction reactions of UO_2 were studied in nonaqueous systems. It was established that an effective oxidation and solution process of UO_2 occurs in TBF saturated with HNO_3 when the equilibrium concentration of HNO_3 in the aqueous phase is greater than 4M (molar ratio of HNO_3 to TBF should be grater than 0.6). It has been shown that the molar nitric acid contained in the complex TBF·$2HNO_3$ with low solubility constant acts as an oxidizer for U (IV) in TBF solutions. Nitrogen oxide evolving during the oxidation of uranium can be recycled for further oxidation and solution processes so that the degree of utilization of nitric acid increases with the process.

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USSR . UDC 546.791:54-145:4

FILIPPOV, A. P., and STRELKOV, L. A.

"Study of the Oxidation and Dissolution Processes of Uranium Compounds in Non-aqueous Media. I. Dissolution of Uranium Oxides in Extractor Solutions Saturated With Mineral Acids"

Leningrad, Radiokhimiya, Vol 13, No 1, 1971, pp 52-57

Abstract: It was shown that heterogeneous oxidation and solution of uranium oxides may be carried out in non-aqueous solutions of mineral acids. Using nitric acid as an example it was established that oxygen-containing acids, normally used as oxidizers in aqueous solutions, may be used successfully as oxidizers in non-aqueous media. The unique characteristics of oxidation in non-aqueous media is that it occurs energetically already at room temperature and with low concentration of the reagents. The solution process of uranium oxide in organic solvents appeared to be very selective: dissolving a 1:1 mixture of uranium (IV) oxide and iron (III) oxide leads to a 300 fold enrichment of uranium after one operation. This selective dissolution of uranium compounds coupled with oxidation may be used for direct extraction of uranium from minerals without having to dissolve them first in acids.

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USSR UDC: 542.943:546.791

STRELKOV, L. A., FILIPPOV, A. P.

"Investigation of Processes of Oxidation and Dissolution of Uranium Compounds in Anhydrous Media. III. Dissolution of Uranium Oxides in Solutions of Di-2-Ethylhexyl Phosphoric Acid"

Leningrad, Radiokhimiya, Vol 14, No 3, 1972, pp 405-409

Abstract: The authors studied dissolution of uranium trioxide, uranium dioxide, and a mixture of uranic and uranous oxides in di-2-ethylhexylphosphoric acid solutions saturated with nitric acid. It was found that the dissolution of uranium trioxide in this medium is determined by the water content in the organic solvent, and is independent of the degree to which the extracting agent is saturated with acid. It was established that oxidation and dissolution of UO_2 and U_3O_8 proceed effectively in a nitric acid-saturated solution of di-2-ethylhexylphosphoric acid when the concentration of HNO_3 in the equilibrium aqueous phase is more than 6M HNO_3 (molar ratio of HNO_3:di-2-ethylhexylphosphoric acid of 0.16 or more). Tetravalent uranium is oxidized in di-2-ethylhexylphosphoric acid solutions by molecular nitric acid as a component part of the complex di-2-ethylhexyl phosphoric acid · HNO_3 with low constant of stability $\tilde{K}_2 = 1.5 \cdot 10^{-3}$.

1/1

USSR UDC 669.017:620.18

BELOBRAGIN, YU. A., KRISHTAL, M. A., MOKROV, A. P., and STRELKOV, V. I., Tula

"Interdiffusion in the Iron-Nickel System During the Investigation of the Kirkendall Effect"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, Jan-Feb 72, pp 108-113

Abstract: The Kirkendall effect was experimentally investigated on multilayer Fe-Ni specimens with passive marks located both on the welding surface and inside the metals at specific distances. The dislocations of the marks in the diffusion zone in the whole area of concentrations of the Fe-Ni system were tested. The results are discussed by reference to diagrams showing dislocations of the marks relative to the x-coordinate, the length variations of specimens as a function of time, and the distribution of non-equilibrium concentration of vacancies in the diffusion zone of the specimen. A sign change of the Kirkendall effect in the area of high Ni concentrations was observed in long-term annealing and at the maximal temperature fo 1340°C, which is explained by the high diffusion mobility of Ni atoms. The development of a diffusion porosity from the Fe side (Frenkel effect), resulting in an elongation of the specimen during annealing according to a parabolic rule, was observed. The non-equilibrium concentration of vacancies along the diffusion area is estimated. Four illustrations, 10 formulas, 11 biblio. refs.

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USSR UDC 624.074.4.04:681.14

STRELKOV, V. V.

"A Random Search Method in the Problem of Optimization of a Cylindrical Wafer Shell"

Moscow, Stroitel'naya Mekhanika i Rashchet Sooruzheniy, No 4, 1972, pp 10-12

Abstract: The problem concerns the optimal designing of a cylindrical wafer shell with a rectangular cell of supporting ribs, during the action of an axial compressive force and the joint action of this force and an external pressure. It is assumed that this structure is capable of functioning at the loads under consideration if the following does not take place: 1) general stability loss with involvement of all the intermediate frames; 2) local stability loss of a shell section between two adjacent frames; 3) stability loss of a panel involving part of a facing enclosed between two pairs of adjacent longitudinal and angular supporting ribs which do not lose stability; 4) local stability loss of a longitudinal supporting rib, this rib being regarded as an infinitely long plate, one longitudinal edge of which is fastened and the other free. The problem is solved by means of a modified known random-search algorithm.

USSR

STRELKOV, V. V., Stroitel'naya Mekhanika i Rashchet Sooruzheniy, No 4, 1972, pp 10-12

As an illustrative example, a cylindrical wafer shell is designed for the action of a compressive axial force T = 565 t, assuming the following to be given: R = 0.9 m, L = 2.2 m, E = 7200 kg/mm^2, μ = 0.3, γ = 2.75 x 10^{-6} kg/mm^3. According to the tracking diagram, the optimal mass is approximately 103 kg. Six possible variants of the structure are presented in a table. 2 figures. 1 table. 7 references.

2/2

USSR

UDC 595.771-167:576.893.161.13

YLISEYEV, L. N., and STRELKOVA, M. V., Department of Medical Protozoology and Karsh Anti-Leishmaniasis Expedition, Institute Medical Parasitology and Tropical Medicine imeni Ye. I. Martsinovsky, Ministry of Health USSR, Moscow

"Evaluation of the Capacity of Sandflies (Phlebotomidae) to Transfer Leishmania Tropica Major Among Greater Gerbils (Rhombomys opimus)"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 3, May/Jun 70, pp 284-293

Abstract: A series of experiments on the feeding of sandflies on greater gerbils, to determine their capacity for transfer of Leishmania was conducted in Kashkadar'ya oblast Uzbek SSR, under natural conditions during 1968 and 1969. The rate of transfer of Leishmania from diseased animals to healthy animals was: Phlebotomus caucasicus, 59-75%; Ph. papatasi, 53%; Sergentomyia arpaklensis, 7-21%; and S. grekovi, 24%. The more serious the leishmani lesion on ear skin of the gerbil donors on which sandflies had their first bite, the greater was the percentage of infection transmitted to healthy animals. The clinical incubation period in great gerbils after infective blood-sucking was 13-15 days. The sandflies picked up the Leishmania parasite immediately after the termination of the incubation period.

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1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EVALUATION OF THE CAPACITY OF SANDFILES,PHLEBOTOMIDAE,FOR TRANSMISSION OF LEISHMANIA TROPICA MAJOR AMONG GREAT GERBILS,

AUTHOR-(02)-YELISEYEV, L.N., STRELKOVA, M.V.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39, NR 3, PP 284-293

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LEISHMANIA, RODENT, INSECTA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0277 STEP NO--UR/0358/70/039/003/0284/0293

CIRC ACCESSION NO--AP0124037

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124037

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SERIES OF EXPERIMENTS ON FEEDING OF SNADFLIES ON GREAT GERBILS (RHOMBOMYS OPIMUS) UNDER CONDITIONS APPROACHING THOSE IN RODENT BURROWS WAS CARRIED OUT. AMONG SANDLFIES FED ON GREAT GERBILS, THE INFECTION RATE WITH LEISHMANIA TROPICA MAJOR WAS FOUND TO BE 59-75PERCENT IN PHLEBOTOMUS CAUCASICUS, 53PERCENT IN PH. PAPATASI, 7-21PERCENT IN SERGENTOMYIA ARPAKLENSIS, 24PERCENT IN S. GERKOVI. THE INFECTION RATE OF SANDFLIES DEPENDED ON THE INTENSITY OF MANIFESTATION OF SPECIFIC LEISHMANIAL LESIONS ON SKIN OF THE EARS OF THE GERBILS DONORS. DEPENDING ON THIS FACTOR, THE INFECTION RATE OF PH. PAPATASI VARIED FROM 7 TO 53PERCENT. TRANSMISSION OF L. T. MAJOR FROM SICK GREAT GERBILS TO HEALTHY ANIMALS HAS BEEN FIRST PROVEN FOR PH. CAUCASICUS AND CONFIRMED FOR PH. PAPATASI UNDER EXPERIMENTAL CONDITIONS. ATTEMPTS TO TRANSMIT THE INFECTION THROUGH S. ARPAKLENSIS FAILED BECAUSE THE LATTER REFUSED TO FEED AGAIN ON GERBILS. THE CLINICAL INCUBATION PERIOD IN GREAT GERBILS AFTER INFECTIVE BLOOD SUCKING BY PH. CAUCASICUS WAS 13 DAYS AND PH. PAPATASI 15 DAYS. SANDFLIES PICKED UP L. T. MAJOR IMMEDIATELY AFTER TERMINATION OF THE CLINICAL INCUBATION PERIOD IN GREAT GERBILS. FACILITY: OTDEL MEDITSINSKOY PROTOZOOLOGII I KARSHINSKAYA PROTIVOLEYSHMANIOZNAYA EKSPEDITSIYA INSTITUTA MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. YE. I. MARTSINOVSKOGO MZ. SSSR, MOSKVA.

UNCLASSIFIED

USSR

8

UDC: 621.317.78

STRELKOVA, Ye. I., TELITCHENKO, G. P.

"An Installation for Measuring the Reference Value of the Power of Measurement Oscillators in the Decimeter Wave Band in the Pulse-Modulated Mode"

Dokl. Nauchno-tekhn. seminara "Metrol. v radioelektron." Tezisy, Ch. 1 (Reports of the Scientific and Technical Conference on Metrology in Radio Electronics. Summaries, Part 1), Moscow, 1970, pp 61-63 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7A194)

Translation: To measure the reference value of the power in the pulse-modulated mode, use is made of comparison with the known power of continuous oscillations modulated to a brief stop. Directional couplers are used for successive transmission of the signal being measured (pulse signal) from the oscillator being checked, and the continuous signal from the auxiliary oscillator to the detector head (through a divider). Further details of measurement and data on the installation are given. Briefly, the characteristics of the installation are: power range of 50-500 mW with a carrier from 400 to 1800 MHz, pulse duration of 0.5-10 msec, and prf of 0.2-10 kHz. E. L.

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STRELKOVSKIY, K. M.

SO: JPRS 55204
16 FEB 72

UDC: 616.31-082(-22)

ORGANIZATION OF STOMATOLOGICAL CARE FOR THE RURAL POPULATION

AC (chief physician) both (public health)
[Article* by K.M. Strelkovskiy, I.S. Filipchik, Khersonskaya Oblast Stomatolo-
gical Polyclinic ~~(chief physician: K.M.~~ Strelkovskiy) and Nizhneserogozskiy
Central Rayon Hospital (chief physician: A.I. Guchenko), Khersonskaya Oblast;
Moscow, Sovetskoye Zdravookhraneniye, Russian, No 1, 1972, submitted 20 July
1971, pp 29-32]

The grand and creative program approved by the 24th Congress of the
CPSU sets large and responsible objectives before Soviet medics. One of them
is continued development and improvement of specialized care, inc uding
stomatology, in rural areas.

Organization of stomatological care for the rural population lags
considerably in scope and quality from that provided for urban residents.
There are very few data on this score in the literature. N.Ya. Arshanskiy,
V. Vorob'yev and L. Rankin, M.I. Lapidus, O.G. Ryabyshenko and P.I. Pivchuk,
H.M. Slutskaya and Yu.G. Komel'chukdiscuss the activity of physicians in
stomatological offices of district and rayon hospitals, as well as matters
pertaining to further improvement of stomatological care for the rural popu-
lation but by far not comprehensively.

In rural areas, the main organizational centers for this type of care
are stomatology offices, and in larger rayons there are stomatological depart-
ments in central rayon hospitals. One, rarely two doctors are employed in
stomatology offices of district hospitals. In some collective farms there
are stomatology offices maintained at their expense. The doctors in district
hospital and farm offices are not supplied with intermediate and junior medical
assistants.

The staff of stomatological institutions in rural areas does not make it
possible to pursue regularly scheduled dental prophylaxis for the child popu-
lation to the extent this is done in cities. In areas with a predominantly
rural population, which includes Khersonskaya Oblast, municipal stomatological
institutions are not in a position to render appreciable aid, as proposed by
N.Ya. Arshanskiy, for regular dental prophylaxis in rural areas, since there

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*Published for the purpose of discussion -- Editor.

4

UDC 621.374.4(088.8)

USSR

KURMAYEV, A. ZH., MIKHAYLOV, A. M., GEL'BSHTEYN, L. S., SLAVNIN, V. A., ODINTSOV, L. N., KOZLOV, A. I., KOROLEVA, R. A., STREL'NIKOV, A. D.

"Pulse Repetition Rate Dividing Circuit"

USSR Author's Certificate No 277845, Filed 9 Jan 69, Published 20 Oct 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4G247P)

Translation: A frequency dividing circuit is proposed, which contains a cycle signal source, a square-wave source, a switch in the cycle signal circuit, a frequency divider and a comparison circuit. In order to improve the noise resistance of the cycle pulse time selection in the presence of low frequency noise, the device is also equipped with a pulse converter included between the divider and the comparison circuit. The converter output is connected to the control input of the switch in the cycle pulse circuit.

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UDC 612.017.12:612.461.269.014.482

USSR

RUBACHEV, I. G., STREL'NIKOV, V. A., FEDOROVA, T. A., KLEMPARSKAYA, N. N., DUKHOVNAYA, E. M., and FURAYEVA, L. P.

"The Effects of Irradiation on the Urinary Excretion of Thymidine and Beta-Aminoisobutyric Acid in Immunized Rats"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunibiologii, Vol 10, Oct 70, p 142

Translation: Whole-body irradiation of animals induces massive decomposition of desoxynucleoproteins and liberation and depolymerization of DNA in the cells of organs sensitive to irradiation. At the same time, there is an increased urinary excretion of desoxynucleosides -- desoxycytidine and thymidine, and of the products of thymidine catabolism -- beta-aminoisobutyric acid. A study of the dynamics of the excretion of these substances makes it possible to elucidate the nature of DNA metabolism in the body during the 1st day after irradiation and, during the subsequent period, the nature of restoration processes taking place in the rapidly regenerating tissues.

In a previous study, we established that after active immunization, rats have an increased urinary excretion of beta-aminoisobutyric acid, especially during

USSR

RUBACHEV, I. G., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunibiologii, Vol 10, Oct 70, p 142

the period of maximum concentration of agglutinins in peripheral blood, and a decreased concentration of plasmocytes in the lymph nodes. In this investigation, we studied the level of DNA decomposition (based on the urinary excretion of thymidine and beta-aminoisobutyric acid) and the dynamics of the formation of antibodies (according to the titers of agglutinins) in vaccinated and irradiated rats. The animals received a single dose of whole-body irradiation (500 r) from the EEGO-2 generator (power, 640 r/min; gamma rays, Co^{60}) 48 hours prior to and 48 hours after vaccination. Immunization was performed with Breslau bacilli killed with heat, which were administered intramuscularly in a dose of 1 billion microbial cells in 0.5 ml. Irradiation prior to and after immunization equally suppressed the formation of agglutinins (approximately three times). During the 1st day after irradiation, the level of thymidine excretion in controls, and immunized animals also increased to an equal degree (5 and 2.5-3 times, respectively). This fact and the equivalent degree of inhibition of antibody formation indicated that immunization performed 48 hours prior to irradiation exerted no protective effects on the

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RUBACHEV, I. G., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunibiologii, Vol 10, Oct 70, p 142

decomposition of lymphoid tissue during the 1st day after irradiation or on its ability to produce antibodies. Subsequently, the level of thymidine excretion by control animals and those of the experimental group differed considerably from the standpoint of excretion of beta-aminoisobutyric acid (these differences were insignificant). During the subsequent period (up to 11 days), irradiated control animals displayed a considerable decrease (3-5 times) in thymidine excretion as compared to the initial level. Normal or above-normal thymidine excretion was observed on the 7th-11th days after immunization in animals immunized after irradiation, and on the 2nd-6th days after irradiation or on the 4th-8th days after immunization in animals immunized prior to irradiation. This development may be associated with regenerative processes which apparently begin earlier and proceed at a more rapid rate.

3/3

Acc. Nr: AP0038109 5 Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1,
pp 91-95

EFFECT OF SODIUM MALEIC HYDRAZIDE ON THE CONTENT OF TOTAL NITROGEN, PROTEINS AND NUCLEIC ACIDS IN POTATO TUBERS

Rakitin, Yu. V.; Strel'nikova, B. D.

K. A. Timiriazev Institute of Plant Physiology, USSR Academy of Sciences, Moscow

The effect of Na—MH on the total and protein nitrogen, DNA and RNA content in potato tubers is investigated. In the pre-harvest period the tops of the plants were sprayed with solutions; the doses ranged between 1.5 and 3.5 kg/ha. Na—MH doses inhibiting germination appreciably altered the nucleic acid and protein nitrogen content in the tubers. It is concluded that the growth-inhibiting action of MH is due to its inhibiting effect on biosynthesis of nucleic acids and of proteins necessary for cell growth in the buds and shoots.

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REEL/FRAME
19731160

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USSR

UDC 632.95 (1)

VASHKOV, V. I., ZAKOLODKINA, V. I., KERBABAYEV, E. B., LARIONOVA, V. D., and STREL'NIKOVA, G. N.

"Insecticidal Properties of Agents Containing Bromophos and Ethyl-Bromophos"

Tr. VNII dezinfektsii i steriliz. (Works of the All-Union Scientific Research Institute of Dininfection and Sterilization), 1971, vyp. 21, t. 2, pp 157-167 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18N425)

Translation: Insecticides SKh-99 (active agent bromophos), neksagen YeS-80, filariol-20 and filariol-60 (active agent ethyl-bromophos) were tested on houseflies, bedbugs, red cockroaches and mosquitoes. The contact action was compared with that of chlorophos. The insecticides have a considerable residual effect, retaining their insecticidal activity up to 1.5 months when applied to glass. When applied directly to the insects, the best of the chemical is filariol-60; its insecticidal properties are 1-8 times higher than those of chlorophos. When insects come into contact with a glass surface treated with the insecticides, the best chemical is neksagan. Filariol-20, Skh-99 and neksagan YeS-80 are also effective larvicides against Aedes mosquitoes. T. A. Belyayeva.

USSR

UDC 632.95

ALIMOV, P. I., VASHKOV, V. I., VOLKOVA, A. P., ZAKOLODKINA, V. I., ZUBOVA, G. M., IRANDOVA, I. I., KERBABYEV, E. B., NEKLESOVA, I. L., STREL'NIKOVA, G. N., and FROLOVA, A. I.

"Insecticidal Properties of O-Methyl-O-Dichlorovinyl-N-Dimethyl Amidophosphate"

Tr. VNII dezinfektsii i steriliz. (Works of the All Union Scientific Research Institute of Disinfection and Sterilization), 1971, vyp. 21, t. 2, pp 68-73 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18N423)

Translation: The substance of formula $(MeO)Me_2NP(O)OCH=CCl_2$ (I) has strong contact, fumigation and intestinal action at the instant of application on houseflies, bedbugs and red cockroaches; the agent is not as strong as other organophosphorus insecticides with respect to mosquitoes. The most active form for application to a glass surface is a water emulsion prepared from compound I with OP-7 (1:1) and a solution in acetone. An alcohol solution is considerably less active. An investigation is made of the larvicidal activity of compound I. The insecticide has no residual effect. T. A. Belyayeva.

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USSR

UDC 632.95

ALIMOV, P. I., VASHKOV, V. I., VOLKOVA, A. P., ZAKOLODKINA, V. I., IRANDOVA, I. I., KERBABAYEV, E. B., NEKLESOVA, I. D., STERL'NIKOVA, G. N., FROLOVA, A. I.

"Insecticidal Properties of Methyl-O-Ethyl (Carbethoxymethyl) Dithiophosphonate"

Tr. VNII dezinfektsii i sterilis. (Works of the All-Union Scientific Research Institute of Disinfection and Sterilization), 1971, vyp. 21, t. 2, pp 73-76 (from RZh-Khimiya, No 18, Sep 72, Abstract No 18N427)

Translation: The results of experiments in studying the insecticidal activity of $Me(EtO)P(S)SCH_2COOEt$ (I) (boiling point 89-92°C/0.02, n^{20}_D 1.5220) show that the compound has a fumigation effect and some contact action, but less than chlorophos. When applied to absorptive surfaces, the chemical is completely ineffective against household insects. Compound I has fumigatory activity against houseflies and is a larvicide against maggots. T. A. Belyayeva.

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STREL'NIKOVA, I.A.

JPRS 59268
6-73

4

VI-6b. DISTRIBUTION COEFFICIENTS OF TELLURIUM AND ZINC FOR CRYSTALLIZATION OF GaSb-InSb MELTS

[Article by M. S. Mirgalovskaya, I. A. Strel'nikova, A. S. Timoshin, V. B. Ufimtsev, Moscow; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June, 1972, p 78]

Experimental studies were made of the distribution coefficients of Te and Zn in GaSb-InSb solutions under the conditions of drawing crystals by the Czochralski method. It was demonstrated that in contrast to the GaAs-InAs system, the dependence of the distribution coefficients of both alloying elements on the composition of the GaSb-InSb melts is characterized by strong negative deviation from the additive straight line. In the case of tellurium the curve passes through a minimum. This behavior of tellurium and zinc is obviously connected with the appearance of intermolecular interaction in the GaSb-InSb solutions leading to the formation of ordered structures.

Experimental studies were made of the viscosity and the electrical conductivity of liquid solutions of GaSb-InSb. The existence of singular peaks corresponding to compositions of 33.3 and 66.6 mole percent GaSb and stable in a broad temperature range was detected. The latter indicates the defined degree of ordering for these compositions. It was established that the concentration dependence of the molar volume is characterized by negative deviation from the laws of ideal solutions which makes the formation of associates of atoms in the GaSb-InSb solutions thermodynamically possible.

USSR

UDC 621.315.592

AGAYEV, Ya., MIRGALOVSKAYA, M. S., MIKHAYLOV, A. R., STREL'NIKOVA, I. A., Physicotechnical Institute, Academy of Sciences of the Turkmen SSR

"Electrical Properties of p-Aluminum Antimonide Single Crystals"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Fiziko-Tekhnicheskikh, Khimicheskikh i Geologicheskikh Nauk, No 6, 1971, pp 9-14

Abstract: The authors studied the electrical properties of p-aluminum antimonide single crystals grown by the Czochralski method. The material was synthesized and the crystals were pulled in the same installation in a helium atmosphere. The specimens cut from the ingots measured approximately 2-2.5 x 3-4 x 12 mm. Platinum or molybdenum probe-leads were attached by spark-discharge welding. The wire leads were 0.05 mm in diameter. The electrical conductivity and Hall effect were measured by the compensation method, using direct current, at temperatures of 80-1300°K. The carrier (hole) concentration of the specimens was $4.6 \cdot 10^{17}$ - $2 \cdot 10^{18}$/cc. No inversion in the sign of the Hall coefficient was observed throughout the entire temperature range. The width of the forbidden band was found to be 1.61 eV in the region of intrinsic conductivity, and the acceptor level was found to be approximately 0.02 eV in the region of extrinsic conductivity.

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1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--POSSIBLE ABSORPTION OF HYDROGEN SULFIDE, ESCAPING DURING THE
VULCANIZATION OF EBONITE MIXTURES, USING ZEOLITES -U-
AUTHOR-(05)-KOCHANOVA, O.M., BLOKH, G.A., KOKMAN, F.S., STRELOK, I.M.,
LEVINA, S.A.
COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(3), 15-17

DATE PUBLISHED--------70

5

SUBJECT AREAS--MATERIALS

TOPIC TAGS--EBONITE, VULCANIZATION, HYDROGEN SULFIDE, ZEOLITE, SYNTHETIC
RUBBER/(U)SKMS50P SYNTHETIC RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0543 STEP NO--UR/0138/70/029/003/0015/0017

CIRC ACCESSION NO--AP0119462
UNCLASSIFIED

2/2 012

CIRC ACCESSION NO--AP0119462 UNCLASSIFIED PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF 8 WT. PARTS ZEOLITES FENAX 2 OR FENAY 3 TO EBONITE (BASED ON SYNTHETIC RUBBER SKMS 50P 100 AND S 40 PARTS) DECREASED THE EVOLUTION OF H SUB2 S DURING VULCANIZATION AT 170DEGREES BY UP TO 60PERCENT. OTHER COM. ZEOLITES (NACOX, FECAA 3, NAX) HAD CONSIDERABLY LOWER H SUB2 S ABSORPTION ABILITY.

FACILITY: SVERDLOVSK. FILIAL NAUCH.-ISSLED. INST. REZIN. PROM., SVERDLOVSK, USSR.

UNCLASSIFIED

USSR

UDC 666.76.004.1

MAMYKIN, P. S., and STRELOV, K. K., Ural Polytechnic Institute imeni S. M. Kirov, Eastern Institute of Refractory Materials

"Some Technological Measures for Increasing the Effectiveness of Refractory Materials"

Moscow, Ogneupory, No 12, 1972, pp 37-40

Abstract: The authors present a general review of properties which refractory materials functioning under extreme conditions should possess. Thermal stresses of refractory materials should be minimal under a high-temperature environment. The thermal stresses are determined mainly by the elasticity modulus, which is very low in fiber refractories. Fiber refractories can be substituted for approximately 20% of the refractory materials used in industry. The effectiveness of refractory materials can also be increased by improving the output of manual work need to repair and construct new blast furnaces. This improvement can be achieved by using large refractory blocks made of grainy refractory materials and fibers and strengthened by 0.01-mm heat-resistant wire. New cementing materials, such as calcium aluminates, alumophosphates, silicates, and polymers with an oxychloride basis should be used in the production of large refractory blocks. Since more than 50% of the refractory materials are subjected to thermal, mechanical, and chemical

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MAMYKIN, P. S., and STRELOV, K. K., Ogneupory, No 12, 1972, pp 37-40

forces, they should be selected on the consideration of reactions taking place between the refractory and the above forces. Special attention should be paid to the reaction of slag with the refractory lining in blast furnaces (three types of reactions are discussed). Only after actual experimentation with a given refractory material can a decision be made as to which material is best suited for a given task. Cooling of the refractory lining by external means should also be employed after a careful study of the temperature requirements.

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Refractory Materials

USSR

UDC 666.76.001.5

STRELOV, K. K., Eastern Institute of Refractories

"Predicting the Production and Uses of Refractories"

Moscow, Ogneupory, No 2, Feb 72, pp 1-4

Abstract: Discussed are certain general aspects in a preparatory study on predicting the production and uses of refractory materials over the subsectors including blast furnace, steelmaking, rolling production,and all other related industries. Use is made of the results of extrapolation and logical expectation of production developments and the potential uses of refractories over the 1980-1985 period. Considerable emphasis is placed on porous materials, including heat insulation products, refractory concretes, large blocks, and moldable materials,to meet the service specifications of a great number of refractory requirements and conform with current scientific trends toward reducing materials consumption. The fabrication of materials with zero porosity in great quantities for major applications in metallurgy and other advanced technologies is stressed. The central topics of planned research projects essential for maintaining and enhancing the effectiveness of refractories under short-, long-term, high- and variable-temperature conditions are cited. (7 bibliographic references)

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1/2 022
UNCLASSIFIED
PROCESSING DATE--18SEP70

TITLE--SHORT RANGE ORDER IN URANIUM AND NIOBIUM SOLID SOLUTIONS -U-

AUTHOR-(03)-STRELOVA, S.V., UMANSKIY, YA.S., IVANOV, O.S.

COUNTRY OF INFO--USSR

SOURCE--J. NUCL, MATER. 1970, 34(2) 160-4

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--URANIUM ALLOY, NIOBIUM ALLOY, SOLID SOLUTION, CRYSTAL LATTICE,
X RAY DIFFUSION, ORDERED ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1985/0382
STEP NO--NE/0000/70/034/002/0160/0164

CIRC ACCESSION NO--AP0100868
UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70
CIRC ACCESSION NO--AP0100868

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SHORT RANGE ORDER IN MUTUAL ARRANGEMENT OF AT. COMPONENTS IN A U-NB SOLID SOLN. OF EQUIAT. COMPN. WAS STUDIED BY AN X RAY DIFFUSION SCATTERING METHOD. THE ATOMS OF U MAINLY SURROUND ATOMS OF NB AND ATOMS OF NB SURROUND ATOMS OF U. AFTER ISOTHERMAL TREATMENT OF THE ALLOY FOR 1 HR AT 1400DEGREES OR 24 HR AT 1050DEGREES, THE SHORT RANGE ORDER PARAMETERS WERE MEASURED FOR 3 SHELLS, AND THE STATIC DISTORTION PARAMETERS OF THE CRYSTAL LATTICE DUE TO DIFFERENCES IN THE AT. VOLS. OF THE COMPONENTS WERE DETD. THE PARAMETERS WERE GREATER FOR THE LOWER TEMP. TREATMENT.

UNCLASSIFIED

1/2 024

UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DEPENDENCE OF THE PHYSICOMECHANICAL PROPERTIES OF SYNTHETIC FIBERS
ON THE DESIGN OF THE TAKE UP SPREADER MECHANISM OF A PP 10001 MACHINE

AUTHOR-(03)-STRELTSES, V.YA., MOISEYEV, G.K., BONDAREV, A.A.

COUNTRY OF INFO--USSR

5

SOURCE--KHIM, VOLOKNA 1970, (2), 34-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CAPRONE, TEXTILE INDUSTRY MACHINERY, SYNTHETIC FIBER, PLASTIC
MECHANICAL PROPERTY/(U)PP10001 TEXTILE MACHINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0097 STEP NO--UR/0183/70/000/002/0034/0036

CIRC ACCESSION NO--AP0132390

UNCLASSIFIED

2/2 024

CIRC ACCESSION NO--AP0132390 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANAL. STUDIES OF THE TAKE UP SPREADER MECHANISM INDICATED THAT IT AFFECTED KAPRON YARN THCIKNESS AND TENSION AT EQUAL INTERVALS ON THE BOBBIN. A COMPENSATING DEVICE WAS PROPOSED TO ELIMINATE THE EFFECTS OF THE SPREADER.

UNCLASSIFIED

USSR

UDC 621.315.592

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KARANOVA, YE. K., DEMAKOV, D. K., STARININ, K. V., STREL'TSOV, and KHAYBULLIN, I. B.

"Study of Single-Crystal SiC Films Obtained by Bombardment of Si Single Crystals With C^+ Ions"

Moscow, Doklady Akademii Nauk SSSR, Vol 200, No 4, 1971, pp 869-870

Abstract: The authors obtained SiC films by bombarding Si single crystals with atomic carbon ions with an energy of 40 kev and a dose of over 10^{17} ions/cm^2 at 600 and 700°. IR absorption spectra were used to identify the ion-implanted films with the SiC compound. Electron-diffraction studies made on the ion-implanted SiC layers by the reflection method showed that a temperature of 700° is necessary to create single-crystal SiC film by the ion bombardment method. To study the structure of the n-SiC-n- and p-Si hetero-junctions created by the ion method, measurements were taken of the photo-emf spectra and I-V characteristics of these junctions. The results indicate a correspondence between the real energy structure of the hetero-junction and the theoretical one. The method of creating heterostructures by ion irradiation makes it possible to create single-crystal layers of compounds of the implanted ion with atoms of the elements making up the sub-

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USSR

KARANOVA, YE. K., et al., Doklady Akademii Nauk SSSR, Vol 200, No 4, 1971, pp 869-870

strate, even in the case of a great difference between the lattice constants of the compound and those of the substrate.

2/2

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--KINETICS OF THE REDUCTION OF MANGANESE FROM SLAG -U-

AUTHOR-(03)-TOPORISHCHEV, G.A., STRELTSOV, A.K., YESIN, O.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(3), 13-17

DATE PUBLISHED---------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--SLAG, MANGANESE OXIDE, CHEMICAL REDUCTION, SILICON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1547 STEP NO--UR/0148/70/013/003/0013/0017

CIRC ACCESSION NO--AP0125173

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125173

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POTENTIOSTATIC AND GALVANOSTATIC METHODS WERE USED TO DET. KINETIC PARAMETERS OF THE REDN. OF MN IN SLAG. MNO (0.03-0.50PERCENT) WAS INTRODUCED INTO THE SLAG ACTING AS AN ELECTROLYTE AND CONSISTING OF 38PERCENT SIO SUB2, 37PERCENT CAO, AND 25PERCENT AL SUB2 O SUB3. MOLTEN IRON, SATD. WITH H SUB2 AND CONTG. UP TO 0.4PERCENT MN, SERVED AS A CATHODE. EXPTL. STATIONARY CURVES ARE GIVEN SHOWING SPECIFIC CURRENTS, WHOSE VALUES ARE PROPORTIONAL TO THE CONCN. OF MN IN SLAG. UNDER STATIONARY CONDITIONS CATHODIC DEPOSITION OF MN FOLLOWS THE REACTION (MN PRIME2 POSITIVE) PLUS 2E EQUALS (MN); THE RATE OF THIS REACTION IS LIMITED BY THE SLOW DIFFUSION OF MN PRIME2 POSITIVE IN THE SALG. THIS TEMP. DEPENDENT DIFFUSION CONST. WAS DETD. AS D SUBMN PRIME2 POSITIVE EQUALS 9.8 TIMES 10 PRIME NEGATIVE3 EXP (MINUS 13,000-T) CM PRIME2-SEC FROM EXPTL. DATA AT 1632 AND 1673DEGREES. THE REDN. OF MN FROM SLAG BY C IS ASSUMED TO FOLLOW THE SCHEME (MNO) PLUS (C) EQUALS (MN) PLUS (CO), WITH AN EQUIL. CONST. LOG K SUB1 EQUALS (14,570-T) PLUS 8.57. IF THE METAL CONTAINS SI AT A CONCN. MUCH HIGHER THAN EQUIL., THEN THE POSSIBLE PROCESS IS (MNO) PLUS (SI) EQUALS (MN) PLUS (SIO), WITH EQUIL. CONST. LOG K SUB2 EQUALS (4180-T) MINUS 1.75 LOG T PLUS 5.27. CALCNS. SHOW THAT THE RATE OF REDN. WITH SI IS 3 ORDERS HIGHER THAN THAT WITH C. HENCE, IN DIFFUSIONAL REGIME, THE REDN. WITH SI IS MORE PROBABLY. SI ALSO ACCELERATES THE DESULFURIZATION PROCESS.

FACILITY: URAL. POLITEKH. INST., SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--FREQUENCY CHARACTERISTICS OF FILAMENTS -U-

AUTHOR-(02)-STRELTSOV, B.N., RADOVSKIY, V.P.

COUNTRY OF INFO--USSR

S

SOURCE--MOSCOW, ELEKTRICHESTVO, NO 2, 1970, PP 78-80

DATE PUBLISHED--------70

SUBJECT AREAS--NAVIGATION

TOPIC TAGS--FREQUENCY CHARACTERISTIC, FILAMENT CHAFF

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1226 STEP NO--UR/0105/70/000/002/0078/0080

CIRC ACCESSION NO--AP0123190
UNCLASSIFIED

022 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0123190

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROPERTIES OF A FILAMENT ARE ANALYZED FOR VARIABLE FIELDS BOTH CONSTANT AND EPRPENDICULAR TO IT USING A FREQUENCY CHARACTERISTIC. EXPRESSIONS ARE GIVEN FOR DETERMINING THE CHARGE OF A FILAMENT AND ITS AERODYNAMIC RESISTANCE.

UNCLASSIFIED

USSR

Extraction and Refining

UDC: 669.35:669.046.54/55

STREL'TSOV, F. N., TRANKOVSKIY, Ye. G., MOLDAVSKIY, O. D.

"Refining of Copper of Impurities upon Melting in a Vacuum Furnace"

Moscow, Tsvetnyye Metally, No 8, Aug 73, pp 40-43.

Abstract: It is demonstrated that the degree of refining of liquid copper is determined by the volatility of the components and is accompanied by evaporation of the copper. During melting in vacuum induction furnaces, the degree of refining is insignificant, while during melting in cathode-ray furnaces it is higher, but is accompanied by greater losses of copper.

USSR

STREL'TSOV, F. N. and LEYBOV, YU. M. UDC: 669.715:669.046.54/55

"The Effectiveness of Various Methods for Refining Aluminum and Its Alloys"

Moscow, Tsvetnyye Metally, No 9, Sep 73, pp 45-48

Abstract: The authors review and evaluate various methods for refining aluminum and its alloys. Various methods are in current use in refining alluminum and its alloys from hydrogen and nonmetallic inclusions. These methods include: the absorption type, processing the melt with chlorides, and purging with active and inert gases. The study shows that the method of purging the melt with inert gas through porous ceramic elements is most effective from the physico-chemical point of view.

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USSR

BARANOVA, Ye. K., GUSEV, V. M., and STREL'TSOV, L. N. UDC: 621.315.592

"Investigating Radiation Defects in Silicon Irradiated by Lithium Ions by the Infrared Absorption Method"

Leningrad, Fizika i tekhnika poluprovodnikov, No 12, 1972, pp 2399-2400

Abstract: This brief communication presents the results of investigations by the infrared absorption method into radiation defects formed in p-silicon monocrystals by the introduction of lithium ions with an energy of 80 kev in dosage intervals varying from $6 \cdot 10^{13}$ to $3 \cdot 10^{16}$ ions/cm^2. The introduction of the ions was made on ILU-3 equipment by a method described in an earlier paper (V. M. Gusev, et al, PTE, 4, 19, 1969). Transmission spectra of the irradiated specimens in the near infrared region of 0.7 to 2.5 microns were obtained with the double-beam IKS-14 spectrophotometer. A sample spectrum is shown. A curve is plotted showing the change in the spectra caused by the annealing procedures. The authors express their thanks to M. I. Gusev for his advice.

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USSR

UDC 539.12

VINITSKIY, A. KH., VOINOV, V. G., STREL'TSOV, I. S., TAKIBAYEV, ZH. S., Academician of the Academy of Sciences Kazakh SSR, and CHASNIKOV, I. YA., Institute of Nuclear Physics of the Academy of Sciences Kazakh SSR, Alma-Ata

"Characteristics of the Coherent Interaction of π^--Mesons with Emulsion Nuclei at 60 Gev"

Moscow, Doklady Akademii Nauk SSSR, Vol. 194, No. 3, 21 Sep 70, pp 544-546

Abstract: Coherent generation of particles in the interaction of high-energy pions with nuclei is discussed. The startup of the Serpukhov accelerator made it possible to study these processes up to energies of 60-70 Gev. This article discusses three- and five-ray events in a VR-2 photoemulsion found after examining tracks of primary pions over a distance of 870 m. It was found that the cross section for the coherent formation of the system $\pi^+\pi^-\pi^-$ in the final state increases with the energy of the primary particle, while the maximum in the effective mass distribution of this system remains in the same region as for an energy of 17 Gev. A considerable rise in the number of five-particle coherent

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USSR

VINITSKIY, A. KH., et al, Doklady Akademii nauk SSSR, Vol. 194, No. 3, 21 Sep 70, pp 544-546

interactions was also found. At 17 Gev the number of events of the reaction

$$\pi^- + A \rightarrow \pi^+ + 2\pi^- + 2\pi^0 + A'$$

was 2% of the reaction

$$\pi^- + A \rightarrow \pi^- + \pi^+ + \pi^- + A^-,$$

while at 60 Gev the number of five-particle coherent states was 70% as compared with the number of three-particle states. It is noted that this value may be somewhat high, since the reaction $\pi^- A \rightarrow \pi^- \pi^0 \pi^- A'$ was not taken into account.

USSR

3

UDC 539.216.2.001.5

GUSEV, V. M., GUSEVA, M. I., KURINYY, V. I., TITOV, V. V., TSYPLENKOV, V. S., BARANOVA, Ye. K., STREL'TSOV, L. N.

"Investigation of the Properties of an Oxide Film Obtained by Atomic Oxygen Ion Bombardment of Silicon and Use of Such a Film for Protecting a PN Junction"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 8, Aug 71, pp 1462-1467

Abstract: The paper presents the results of a study of the thickness of oxide films as a function of the conditions of silicon bombardment by atomic oxygen ions, as well as the composition and dielectric properties of the films and the space charge in them. The protective properties of oxide on structures with ion-injected PN junctions are studied. Most of the experiments were done on N-type and P-type silicon with resistivity of 7-10 Ω·cm. The specimens were irradiated in the chamber of the ILU-2 ion accelerator. It was found that the thickness of the oxide film increases in proportion with the energy of the ions and decreases as the ion current density increases. The dielectric strength of the insulating layer was $(3-10)\cdot 10^6$ W/cm. It is shown that the composition of the film depends on subsequent annealing.

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USSR

GUSEV, V. M., et al., Radiotekhnika i Elektronika, Vol 16, No 8, Aug 71, pp 1462-1467

By using ion oxidation to protect ion injected PN junctions, the authors were able to synthesize high-voltage low-power diodes with a breakdown voltage of 3.3 kV.

2/2

STREL'TSOV, L.N.

Physics/Electronics

JPRS 54318

26 October 1971

UDC: 539.216.2.001.5

SHIELDING FILM p-n JUNCTIONS BY ION BOMBARDMENT

[Article by V.M. Gusev, M. I. Guseva, V. I. Kurinnyy, V. V. Titov,
V. S. Tsyplenkov, Yu. K. Baranova, and L. N. Strel'tsov; Moscow, Radiotekhnika
i Elektronika, Russian, No 5, 1971, pp [illegible]]

The results are given of an investigation of the thickness of oxide films as a function of the irradiation of silicon by nascent oxygen ions. It is established that the film thickness increases in proportion with the energy of the ions and decreases with increasing ion current density. The condition of the oxide film is studied together with its insulating and protective characteristics. The film has an amorphous structure. The dielectric stability of the insulating layer is (3-10).10^6 V/cm. It is shown that the condition of the film depends on the temperature of the subsequent annealing. The use of ion oxidation for protecting ion-implanted p-n junctions has permitted the manufacture of high-voltage, low-power diodes with a breakdown voltage of 3.3 kV.

As we know, with sufficiently high dosages of metal and semiconductor irradiation by oxygen ions with an energy of several tens of kiloelectron-volts, an oxide layer forms on the surface [1,2]. The peculiarity of ionic oxidation is that the distribution of the installed oxygen atoms is in the form of the Gaussian curve with a rather large half-width; i.e., behind the SiO_2 film is a silicon layer in which the oxygen concentration drops off with depth in accordance with the tail of the distribution of the implanted atoms. The ion oxidation process is done at room temperature.

This paper gives the results of an investigation of the oxide film thickness as a function of the silicon irradiation by nascent oxygen ions and of the condition of the dielectric characteristics of the film and its space charge. The protective characteristics of the oxide on structures with ion-implanted p-n junctions are studied. The major portion of the experiments were conducted with electron and hole silicons with a resistivity of 7-10 ohm cm. The specimens were irradiated in the chamber of the ILU-2 ion accelerator [3].

[I - USSR - F]

STREL'TSOV, L.N.

STRELTSOV. L.N

Physics

JPRS 54312

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26 October 1971

UDC: 539.216.2:001.5

SHIELDING FILM p-n JUNCTIONS BY ION BOMBARDMENT

[Article by V.M. Gusev, M. I. Guseva, V. I. Kurinnyy, V. V. Titov, V. S. Tsyplenkov, Ye. K. Baranova, and L. N. Strel'tsov; Moscow, *Radiotekhnika i Elektronika*, Russian, No 8, 1971, pp 1462-1467]

The results are given of an investigation of the thickness of oxide films as a function of the irradiation of silicon by nascent oxygen ions. It is established that the film thickness increases in proportion with the energy of the ions and decreases with increasing ion current density. The condition of the oxide film is studied together with its insulating and protective characteristics. The film has an amorphous structure. The dielectric stability of the insulating layer is (3-10).10^6 V/cm. It is shown that the condition of the film depends on the temperature of the subsequent annealing. The use of ion oxidation for protecting ion-implanted p-n junctions has permitted the manufacture of high-voltage, low-power diodes with a breakdown voltage of 3.3 kV.

As we know, with sufficiently high dosages of metal and semiconductor irradiation by oxygen ions with an energy of several tens of kiloelectron volts, an oxide lay forms on the surface [1,2]. The peculiarity of ionic oxidation is that the distribution of the installed oxygen atoms is in the form of the Gaussian curve with a rather large half-width; i.e., behind the SiO_2 film is a silicon layer in which the oxygen concentration drops off with depth in accordance with the tail of the distribution of the implanted atoms. The ion oxidation process is done at room temperature.

This paper gives the results of an investigation of the oxide film thickness as a function of the silicon irradiation by nascent oxygen ions and of the condition of the dielectric characteristics of the film and its space charge. The protective characteristics of the oxide on structures with ion-implanted p-n junctions are studied. The major portion of the experiments were conducted with electron and hole silicons with a resistivity of 7-10 ohm cm. The specimens were irradiated in the chamber of the ILU-2 ion accelerator [3].

[I - USSR - F]

STREL'TSOV, L.N,

1/2 037 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--ABSORPTION OF LIGHT ON CHARGE CARRIERS IN STRONGLY DOPED SILICON AND GERMANIUM -U-

AUTHOR-(02)-STRELTSOV, L.N., TITOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(4), 715-21

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--SILICON, GERMANIUM, DOPED ALLOY, HALL EFFECT, ABSORPTION COEFFICIENT, ION BOMBARDMENT, ELECTRIC CONDUCTIVITY, METAL FILM, LIGHT ABSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0484 STEP NO--UR/0449/70/004/004/0715/0721

CIRC ACCESSION NO--AP0126236

UNCLASSIFIED

CIRC ACCESSION NO--AP0126236

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TRANSMISSION AND REFLECTION SPECTRA OF SI AND GE LAYERS, STRONGLY ALLOYED BY THE ION BOMBARDMENT METHOD, WERE INVESTIGATED. AN ANAL. OF THE SPECTRAL DEPENDENCES OF THE ABSORPTION COEFF. REVEALS THAT THE ABOSRPTION OF LIGHT BY CHARGE CARRIERS IN THESE ELEMENTS IS SUITABLE DESCRIBED BY DEPENDENCES CALCD. FOR THE CASE OF CARRIER SCATTERING BY ACOUSTICAL VIBRATIONS OF THE LATTICE CONTRADICTING EXISTING DATA ON THE TEMP. DEPENDENCES OF THE HALL EFFECT AND ELEC. COND. THE CONTRADICTION IS EXPLAINED BY THE DIFFERENCE IN CHARACTER OF LIGHT ABSORPTION PROCESSES AND THE HALL EFFECT AND ELEC. COND.

⑦

USSR UDC 632.95

BLIZNYUK, N. K., KVASHA, Z. N., VARSHAVSKIY, S. L., BARANOV, Yu. I., LIBMAN, B. Ya., STREL'TSOV, R. V., PROTASOVA, L. D., MARKOVA, L. I., KHOKHLOV, P. S., MADZHARA, G. A., KIRILINA, L. E., All-Union Scientific Research Institute of Phytopathology

"A Method of Making Thiophosphonyl Dihalides"

USSR Author's Certificate No 337384, filed 31 Oct 69, published 2 Jun 72 (from RZh-Khimiya, No 9, May 73, abstract No 9N500 by T. G. Chekareva)

Translation: Compounds of the general formula $RP(S)X_2$ (I) ($R = C_1$-C_{12}-alkyl, cycloalkyl, aryl, unsubstituted alkyl or alkyl containing substituents, Cl or Br; X = Cl, Br) are synthesized by reacting $(RS)_3P$ (II) with a 2-10-fold excess of PX_3 with heating to 250-330°C in an autoclave. Example. A mixture of 0.07 mole of II (R = Me) and 0.7 mole of PCl_3 is heated in an autoclave test tube of stainless steel at 290-320°C for 5 hours. The excess PCl_3 is driven off at atmospheric pressure and distillation of the residue in a vacuum gives I (R=Me, X=Cl), boiling point 70-3°/80, $n^{20}D$ 1.5510, d_4^{20} 1.4421, yield 52%. Similar methods are used to produce other compounds of type I (given are R, X, boiling point in °C/mm, $n^{20}D$, d_4^{20}, yield in %): Et, Cl, 64-8/15, 1.5418, 1.3527, 58; Pr, Cl, 85-8/15, 1.5285, 1.2942, 40; iso-Pr, Cl, 72-5/15, 1.5290, 1.3017, 47.5; Bu, Cl, 111-13/25, 1.5269, --, 65;

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(7)

SUKHOMLINOV, B. P., Vopr. tekhnol. ulavlivaniya i pererab. produktov koksovaniya, Kharkov, 1972, pp 50-56

sulfur with a sufficient amount of powdered SL. A SN screw mixer is recommended for bringing the components into contact under pressure and pulverizing them at the same time.

2/2

USSR

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BABII, V. V., BLIZNYUK, N. K., DENISENKOVA, R. N., KOLOMIYETS, A. F., STREL'TSOV, R. V., FILIN-KOLDAKOV, B. V.

"Method of Fighting Undesirable Vegetation"

USSR Author's Certificate No 303038, filed 20/04/67, published 5/07/71. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N703P by T. A. Belyaeva).

Translation: In order to increase the herbicidal properties of α-(2, 4, 5-tricholorophenoxy)-propionic acid, it is suggested that it be used as its benzylester, which is more active than the other esters of this acid and has very low volatility.

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USSR

UDC 632.95

BABIN, V. V., DENISENKOVA, R. N., UGRYUMOV, YE. P., SHCHEGLOV, YU. V., BLIZNYUK, N. K., and STREL'TSOV, R. V., North Caucasus Scientific Research Institute of Phytopathology and All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Herbicide"

USSR Author's Certificate No 250602, filed 14 Jun 68, published 12 Feb 70 (from RZh-Khimiya, No 18, 25 Sep 70, Abstract No 18N700 P, by P. V. Popov)

Translation: Bis-(aryloxyacetyl)-propyleneglycols-1,3 with general formula $ArOCH_2C(O)OO(CH_2)_3OC(O)-CH_2OAr$ (Ar = substituted Ph) are low in volatility, exhibit greater toxicity for dicotyledonous weeds than butyl esters of aryloacetic acids and are low in toxicity for cultivated plants. New herbicides are best used as aqueous emulsions in schedules recommended for cases in which aryloacetic acids are used.

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USSR

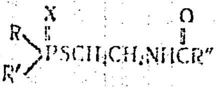
UDC: 547.495.1'26.118.07

BLIZNYUK, N. K., STREL'TSOV, R. V., KIRILINA, L. E., ZHEMCHUZHIN, S. G., KHOKHLOV, P. S., All-Union Scientific Research Institute of Phytopathology

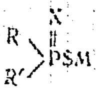
"A Method of Producing Organophosphorus Compounds"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 26, 1970, Soviet Patent No 280475, Class 12, filed 15 May 69, p 26

Abstract: This Author's Certificate introduces: 1. A method of producing organophosphorus compounds of the general formula



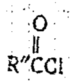
where X is oxygen or sulfur, R is an alkyl, aryl, aralkyl, alkoxyl, alkylthio, aryloxy or arylthio, R' is an alkoxy, alkylthio, aryloxy, or arylthio, benzyloxy, benzylthio or amino group, and R" is an alkyl, alkoxyl or amino group. As a distinguishing feature of the patent, the yield of the goal products is increased by interacting amido- or ether salts od phosphorus acids of the general formula



USSR

BLIZNYUK, N. K., et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 26, 1970, Soviet Patent No 280475, Class 12, filed 15 May 69, p 26

where X, R and R' have the meanings listed above, and M is an alkali metal or substituted ammonium, with acid chlorides of the general formula



$$R''\overset{O}{\overset{\|}{C}}Cl$$

where R" has the meanings listed above, in an inert organic solvent followed by ethylenimine treatment of the reaction mass and isolation of the goal product by conventional methods. 2. A modification of this method in which the process is carried out at a temperature of 20-80°C.

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USSR

UDC 632.95

BLIZNYUK, N. K., STREL'TSOV, R. V., KHOKHLOV, P. S., and ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology

"A Method of Synthesizing Dithiophosphonic Acid Amide-Esters"

USSR Author's Certificate No 259879, filed 17 Jan 69, published 12 Apr 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N557 P)

Translation: Dithiophosphonic acid amide-esters of the general formula $RCONHCH_2CH_2SP(S),(R')NR''R'''$ (I) (R = aryloxyalkyl; R' = alkylaralkyl or aryl; R'' and R''' = H, alkyl, or aralkyl), which have a wide spectrum of physiological activity and may be used as pesticides, are synthesized by the reaction of anhydrides of dithiophosphonic acids with primary or secondary amines in the presence of tertiary amines, followed by treating the resultant dithiophosphonic acid amide salt with RCOCl and ethylenimine. Twenty five thousandths mole of Et_3N is added at approximately 20°C (cooling) with agitation to a mixture of 0.025 mole of methyldithiophosphonic acid anhydride, 0.025 mole of $BuNH_2$ and 30 ml of C_6H_6. The mass is stirred for one hour at 20°C and for two hours at 50°C, after which a solution of 0.025 mole of $2,4\text{-}Cl_2C_6H_3OCH_2COCl$ in 15 ml of C_6H_6 is added slowly, stirred

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BLIZNYUK, N. K., et al., USSR Author's Certificate No 259879, filed 17 Jan 69, published 12 Apr 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N557 P)

for two hours, and treated with a solution of 0.025 mole of ethylenimine in 5 ml of C_6H_6. The mixture is agitated for one hour at 20°C, 3 hours at 50°C, cooled and the Et_3N hydrochloride is removed by filtration. The filtrate is washed with water, dried, and after concentration by evaporation under vacuum, compound I is obtained in the residue (given are R, R', R'', R''', empirical formula, yield in %, and $n^{20}D$): 2,4-$Cl_2C_6H_3OCH_2$, Me, H, Bu, $C_{15}H_{23}Cl_2N_2O_2PS_2$, 89.5, 1.5865; 2,4,5-$Cl_3C_6H_2OCHMe$, Ph, H, Bu, $C_{21}H_{26}Cl_3N_2$-O_2PS_2, 87.5, 1.5975; 2,4-$Cl_2C_6H_3OCH_2$, $PhCh_2$, H, Bu, $C_{21}H_{27}Cl_2N_2O_2PS_2$, 92, 1.6080; 2,4-$Cl_2C_6H_3OCH_2$, $PhCH_2$, Et, Et, $C_{21}H_{27}Cl_2N_2O_2PS_2$, 92, 1.6050; 2,4-$Cl_2C_6H_3OCH_2$, $PhCH_2$, H, $PhCH_2$, $C_{24}H_{25}Cl_2N_2O_2PS_2$, 93.8, 1.6285; 2,4-$Cl_2$-$C_6H_3OCH_2$, $PhCH_2$, H, Ph, $C_{23}H_{23}Cl_2N_2O_2PS_2$, 96.1, 1.6235.

USSR

UDC 632.95

BABIN, V. V., DENISENKOVA, R. N., UGRYUMOV, YE. P., SHCHEGLOV, YU. V., BLIZNYUK, N. K., STREL'TSOV, R. V., and KOLOMIYETS, A. F., Northern Caucasus Scientific Research Institute of Phytopathology; All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Herbicide"

USSR Authors' Certificate No 250603, filed 14 Jun 68, published 26 Jan 70, (from RZh-Khimiya, No 20 (II), 25 Oct 70, Abstract No 20 N601P by N, B. VSEVOLOZHSKAYA)

Translation: Compounds of the general formula $/\overline{4}\text{-Cl-2RC}_6\text{H}_3\text{OCH}_2\text{C(O)O}\overline{7}_2\ \text{SnBu}_2$ (I) (R = Cl or Me) are not inferior in herbicidal activity to butyl esters of the corresponding aryloxyalkylcarboxylic acids. For example, mustard plants in the six-leaf phase were sprayed with aqueous solutions of I in a does of 50, 100, 250 and 500 g/ha (calculated in acid equivalent). The dose at which the weight of aboveground portions of the plant declines 50% was 53 g/ha for I (R = Cl), whereas that for the butyl ester of 2,4-D was 61 g/ha.

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USSR

UDC 547.341.26.118.07

BLIZNYUK, N. K., STREL'TSOV, E. V., KIRILINA, L. E., and ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology

"A Method of Making Dithiofluorophosphonic Acid Esters"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 35, Soviet Patent No 287016, class 12, filed 31 Oct 69, published 19 Nov 70, p 40

Translation: This Author's Certificate introduces a method of making dithiofluorophosphonic acid esters of the general formula

$$RP(S)FSCH_2CH_2NHCOR'$$

where R is an alkyl, aryl or aralkyl, and R' is an aklyl, aryl or aryloxylalkyl. As a distinguishing feature of the patent, anhydrides of dithiophosphonic acids are treated with potassium fluorides in an organic solvent such as methyl ethyl ketone with subsequent treatment of the resultant salt of dithiofluorophosphonic acid in a carboxylic acid chloride and ethylenimine, and isolation of the product by conventional methods.

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BLIZNYUK, N. K., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 35, Soviet Patent No 287016, class 12, filed 31 Oct 69, published 19 Nov 70, p 40

The patent also coverts a modification of this method distinguished by the fact that the process is carried out at 15-60°C.

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1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THIOPHOSPHORYLATED ETHYLAMIDES OF ARYLOXYALKANE CARBOXYLIC ACIDS
-U-

AUTHOR-(05)-BLIZNYUK, N.K., STRELTSOV, R.V., KIRILINA, L.E., KHOKHLOV,
P.S., ZHEMCHUZHIN, S.G.

COUNTRY OF INFO--USSR

S

SOURCE--U.S.S.R. 266,769
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC PHOSPHORUS COMPOUND, AMIDE, PHOSPHORUS SULFIDE,
ALKANE, CARBOXYLIC ACID, ORGANIC SYNTHESIS, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1422 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128821

UNCLASSIFIED

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CIRC ACCESSION NO--AA0126821 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- PROCESSING DATE--20NOV70

ABSTRACT. THIOPHOSPHORYLATED ETHYLAMIDES OF ARYLOXYALKANECARBOXYLIC ACIDS RP(Y)(XR PRIME1)SCH SUB2 CH SUB2 NHCOR PRIME2 (R EQUALS ALKYL, ARYL, ARALKYL, OXYALKYL(ARYL), THIOALKYL(ARYL); R PRIME1 EQUALS ALKYL, ARYL, ARALKYL; R PRIME2 EQUALS ARYLOXYALKYL; X AND Y EQUALS O, S); WERE PREPD. BY TREATING DERIVS. OF P THIO ACIDS WITH DERIVS. OF ARYLOXYALKANECARBOXYLIC ACID. SALTS RP(Y)(XR PRIME1) SH.M (R, R PRIME1, X, AND Y ARE SAME AS THE ABOVE AND M IS AN ORG. OR INORG. CATION), WERE USED FOR P THIOACID DERIVS.; ARYLOXYALKANECARBOXYLIC ACID CHLORIDE WAS USED FOR THE ARYLOXY, ALKANECARBOXYLIC ACID DERIV.; AND THEIR MIXT. WAS TREATED WITH ETHYLENIMINE. THE TITLE PROCESS TOOK PLACE IN AN ORG. SOLVENT, SUCH AS C SUB6 H SUB6, AT 15-20DEGREES.

FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF PHYTOPATHOLOGY.

UNCLASSIFIED

USSR

5

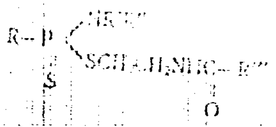
UDC: 547.26'118'122.17

BLIZNYUK, N. K., ~~STREL'~~TSOV, R. V., KHOKHLOV, P. S., ZHEMCHUZHIN, S. G., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"A Method of Producing Amide Esters of Dithiophosphonic Acids"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 3, 1970, p 31, Patent No 259879, filed 17 Jan 69

Abstract: This Author's Certificate introduces a method of producing amide esters of dithiophosphonic acids of the general formula



$$R-\underset{\underset{S}{\|}}{P}\begin{cases} NR'R'' \\ SCH_2CH_2NH\underset{\underset{O}{\|}}{C}-R''' \end{cases}$$

where R is an alkyl, aralkyl or aryl; R' and R" are hydrogen, an alkyl, or an aralkyl; R''' is an aryloxyalkyl. The distinguishing feature of this method is that an anhydride of dithiophosphonic acid reacts with a primary or secondary amine in the presence of tertiary amines with subsequent sequential treatment of the resultant salt of dithiophosphonic acid amide in aryloxyalkylcarboxylic acid chloride and ethylenimine.

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USSR

KALISHEVSKIY, L. L., NIKITUSHKINA, G. P., STREL'TSOV, V. Ya. UDC: 532.526

"Experimental Investigation of a Turbulent Boundary Layer in the Case of Intensive Blow-in"

Tr. Mosk. vyssh. tekhn. uch-shcha im. N. E. Baumana (Works of the Moscow Higher Technical Academy imeni N. E. Bauman), 1971, No 144, pp 80-87 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B970)

Translation: The article deals with analysis of the results of an experimental study of an isothermal boundary layer on a porous plate measuring 450 × 50 mm when air is blown into air. The blow-in intensity $(\rho V)_\infty/(\rho U)_\infty$ varied over limits from 0.0008 to 0.022. The velocity of the main flow was $\sim 40\ m\cdot s^{-1}$. There was a slight negative pressure gradient. Included in front of the porous plate was a section $l = 62$ mm without injection, and the boundary layer was suctioned off in front of this section to eliminate the influence of the initial conditions. In the experiments, the thickness distribution of the boundary layer of dynamic and static pressures was measured in 12 sections lengthwise of the plate. The flowrate of the air blown in through the porous plate was determined. The pressure field was taken

USSR

KALISHEVSKIY, L. L. et al., Tr. Mosk. vyssh. tekhn. uch-shcha im. N. E. Bauman, 1971, No 144, pp 80-87

by pneumometric probes with aperture size of 0.1 mm. Measurement accuracy was ±2%. The velocity field in the boundary layer over the plate was determined on the basis of the measurements. The integral characteristics of the boundary layer were calculated: the displacement thickness δ^*, the impulse loss thickness δ^{**}, the formfactor $H = \delta^*/\delta^{**}$, the coefficient of friction on the plate C_{fw}.

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USSR

UDC 535.853.34

OBREIMOV, I. V., Academician, and STREL'TSOV, Ye. A.

"Monochromator With Concave Diffraction Grating for a Large Interval of Wave Lengths"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 10, Oct 72, pp 46-51

Abstract: A high-transmission monochromator with concave diffraction grating, which makes possible to eject beams of light of up to 0.1 nm monochromatissity, is described. The installation of the concave diffraction grating, its base, and setting in motion are discussed by reference to diagrams. The exit slit of the monochromator is located on the Rowland circle, which has a diameter equal to the radius R of the grating. In this case, the image of the slit by the wave length λ is also located on the Rowland circle at a point determined from a given function. Values of the length of waves ejected by the exit slit of the monochromator, in the case of R/2=500 mm, are tabulated. A 1 mm displacement of the motion screw corresponds to the 6.67 nm change of the wave length. The individual steps in setting the monochromator are explained and its qualities, as a stability of readings during a half-year period, are indicated. Eight illustr., two tables, two formulas, two biblio. refs.

1/1

USSR

UDC 669.891.5.71.725.018.8(088.8)

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STROGANOVA, V. F., TEREKHOVA, V. F., SAVITSKIY, Ye. M., STREL'TSOV, Ye. I., IGNATOVA, L. I., NAKONECHNIKOV, A. I., ZAV'YALOV, A. I. [Institute of Metallurgy imeni A. A. Baykov, Physics and Energy Institute]

"Calcium-Based Alloy"

USSR Author's Certificate No. 276422, Filed 17/12/68, Published 16/10/70. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5, I761P).

Translation: In order to increase the corrosion resistance of binary Ca-Al alloys, it is suggested that they be additionally alloyed with Be with the following relationships of components (in %): Al 0.5-1.5, Be 0.3-0.8, remainder Ca. The new alloy, while retaining high mechanical properties, has corrosion resistance defined by the weight gain of specimens of 0.003 g/cm^2 per 100 hours, i. e., is practically not oxidized in air (in an atmosphere with normal relative humidity). The melting point of the alloy is 580-600°, the specific gravity $\leq$ 1.7 g/cm^2. It is suggested for use in atomic power engineering.

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TITLE--PRODUCTS OF THE PHOTOCHEMICAL NITROSATION OF CHLOROCYCLOHEXANE -U-

AUTHOR-(05)-SEMINA, G.N., ZELENSKAYA, L.G., LEVASHOVA, L.A., KUZNETSOVA,
K.YE., STRELTSOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 103-9

DATE PUBLISHED---------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC OXIME COMPOUND, CHLORINATED ORGANIC COMPOUND,
CYCLOHEXANE, PHOTOCHEMISTRY, NITROSYL CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0904 STEP NO--UR/0204/70/010/001/0103/0109

CIRC ACCESSION NO--AP0124565
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124565

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NOCL AND HCL, 0.3 AND 0.6 1.-MIN, RESP., WERE BUBBLED INTO 1700 ML CHLOROCYCLOHEXANE AT 25DEGREES USING A 750 W LIGHT; AFTER 8 HR, 240 G HEAVY OIL SEPD., CONTG. 11.6PERCENT CHLOROCYCLOHEXANE, 29.4 HCL, AND 55.9 ISOMERIC CHLOROCYCLOHEXANONE OXIMES. HYDROLYSIS OF AN ALIQUOT WITH 20PERCENT H SUB2 SO SUB4 FOR 30 MIN GAVE 1.9PERCENT CHLOROCYCLOHEXANE, 2.8 CYCLOHEXANONE, 65.0 CHLOROCYCLOHEXANONE, 4.0 CYCLOHEXANONE OXIME, AND 23.4 TAR. THE SOLN. AFTER 10 HR CONTAINED 3.0PERCENT 1,2 TRANS, 2.0 MIXED 1,3 AND 1,4 TRANS, 0.9 1,2 AND 1,4 CIS, 0.5 1,3 CIS, AND 0.3 1,1,DICHLOROCYCLOHEXANES, AND 0.5 TRICHLOROCYCLOHEXANE. IN THE NITROSATION OF CYCLOHEXANE ADDING CHLOROCYCLOHEXANE INCREASED THE CONTENT OF CHLOROCYCLOHEXANONE OXIME IN THE OIL FROM 0.6PERCENT (AT 0.7PERCENT ADDED) TO 4PERCENT (AT 12PERCENT ADDED). FACILITY: GOS. NAUCH.-ISSLED. PROEKT. INST. AZOT. PROM. PROD. ORG. SIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--CYCLOALKANONE OXIME HYDROCHLORIDES -U-

AUTHOR--STRELTSOVA, A.A.

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COUNTRY OF INFO--USSR

SOURCE--BRIT. 1,189,723

DATE PUBLISHED--29APR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CYCLIC GROUP, ALKANE, OXIME, CHLORINATED ORGANIC COMPOUND, ORGANIC SYNTHESIS, CHEMICAL PATENT, IRRADIATION EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1446 STEP NO--UK/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0120234

UNCLASSIFIED

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AA0120234

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IMPROVED YIELDS OF CYCLOALKANONE OXIME HYDROCHLORIDES WERE OBTAINED BY IRRADN. OF CYCLOALKANES SATD. WITH HCL AND WITH NOCL MAINTAINED AT 0.01-2PERCENT IN A REACTION LAYER THICKNESS OF 10-500 MM AT MINUS 5 TO PLUS 30DEGREES, USING A HG-TL LAMP TO DECREASE ELEC. ENERGY CONSUMPTION. THUS, 35.1 CYCLOHEXANE CONTG. 0.4PERCENT NOCL AND SATD. WITH HCL GAVE 98PERCENT CYCLOHEXANONE OXIME HYDROCHLORIDE. SIMILARLY PREPD. WERE 52PERCENT METHYLCYCLOHEXANONE OXIME HYDROCHLORIDE AND 90PERCENT CYCLODODECANONE OXIME HYDROCHLORIDE. FACILITY: STATE SCIENTIFIC RESEARCH AND DESIGN INSTITUTE OF NITROGEN INDUSTRY.

UNCLASSIFIED

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UNCLASSIFIED PROCESSING DATE--03JUL70

TITLE--THE ATYPICAL CLINICAL COURSE OF MITRAL LESION -U-

AUTHOR--DYACHENKO, L.F., STRELTSOVA, E.V.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 1, PP 24,
29

DATE PUBLISHED--------70

12
5
22

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEART SURGERY, HEART DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1979/0869 STEP NO--UR/0589/70/104/001/0024/0029

CIRC ACCESSION NO--AP0047343

UNCLASSIFIED

Acc. Nr: AP0047343 Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,
Vol 104, Nr/ , PP 24-29

THE ATYPICAL CLINICAL COURSE OF MITRAL LESION

D'yachenko, L. F.; Strel'tsova, E. V.

In the paper the authors report the analysis of clinical data in 127 patients with
mitral lesion, in whom certain deviations from the typical clinical picture of mitral ste-
nosis and insufficiency were observed. Prior to surgery in all the investigated patients
marked mitral stenosis, and in some cases insignificant regurgitation were suspected.
During the operation in 19 cases "pure" mitral insufficiency or its predominance were
observed. Retrospective analysis of all the data demonstrated that all the routine methods
of investigation, used separately in mitral lesion, could not utterly exclude the possi-
bility of erroneous diagnosis. The precise diagnosis of predominant stenosis or mitral
valve insufficiency could be established only in combined estimation of clinical and
special methods of investigation.

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REEL/FRAME
19790869

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Acc. Nr: AP0036829 Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 123-126.

TYPES AND VIRULENCE OF HEMOLYTIC STREPTOCOCCI ISOLATED FROM SCARLET FEVER PATIENTS

Gladkova, K. K.; Strel'tsova, N. A.; Cherkasskaya, R. S.;
Kaminskaya, E. I.; Fiks, L. I.

The type composition of hemolytic streptococci isolated from scarlet fever patients in 1966—1968 are presented. Of the typed strains, 134 (49%) belonged to type 4, and 63 (22.9%) — to type 1. The percentage of M-containing strains among the most widespread types of streptococci (4 and 1) was 68. The greatest number of M-containing cultures (77%) was revealed among the strains belonging to type 4, which was the «leading» during the period under study.

D.p.

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REEL/FRAME
19721746

USSR

UDC: 53.082.52

ARTYSHEVSKIY, P. P., ZADDE, V. V., ZAYTSEVA, A. K., ZATULOVSKIY, L. M., KRAVETSKIY, D. Ya., STREL'TSOVA, V. I., CHAYKIN, P. M., All-Union Scientific Research Institute of Electrothermal Equipment

"Photovoltaic Cells Made From Silicon Crystals With Special Cross Sectional Shapes Grown by the Stepanov Method"

Moscow, Izv. AN SSSR: Ser. Fizicheskaya, Vol 36, No 3, Mar 72, pp 522-524

Abstract: A previously described method (Artyshevskiy, P. P. et al., Izv. AN SSSR: Ser. Fiz., Vol 35, 1971, p 469) was used for growing noncylindrical silicon crystals to be tested in solar batteries. Polycrystal and single crystal specimens of *p*-conductivity with resistivity ranging from 0.1 to 15 Ω·cm were grown, cut transversely into thin plates and polished on one face. The *pn* junction was made by phosphorus diffusion. The finished cells had an area of 0.8-1.2 sq. cm. Cells made from polycrystals had higher efficiency than Czochralski cells. The shunt resistance of the polycrystals was high, showing high purity of the semiconductor material. The [illegible] characteristics of cells made from single crystals were not as good as those of the polycrystal cells, which was attributed

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FYSHEVSKIY, P. P. et al., IAN SSSR: Ser. Fiz., V 36, 1972, pp 522-524

o the low purity of the single crystal material as evidenced by low shunt resistance. This same index shows that contamination is a random factor rather than being due to the method of crystal growing. On the whole, the results show that photovoltaic cells made from noncylindrical crystal rods are at least as good as cells made from Czochralski crystals.

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Physical Properties

USSR

UDC 620.179.14

KUZNETSOV, I. A., BASHKIROV, YU. P., STRELYANOV, V. YE.

"Magnetic, Electric, and Mechanical Properties of 38KhS Steel after Isothermal Quenching in Connection with Developing a Nondestructive Control Technique"

Sverdlovsk, Defektoskopiya, No 1, 1971, pp 96-105

Abstract: Results are presented from a study of the magnetic, electric, and mechanical properties and structure of three 38KhS steel melts as a function of different conditions of isothermal quenching in alkali melts. A study was made of the effect of variation of the chemical composition (within the limits of the type of steel) and the initial structure on the physical properties of the steel. Recommendations are presented for the development and application of nondestructive methods of controlling the structure and mechanical properties.

The indicated properties of the 38KhS steel melts show that there is a significant difference between these properties of the investigated steel both in the initial state and after isothermal quenching. Variation of the chemical composition within the limits of the type of steel has a significant effect on its properties. The results obtained permit establishment of more correct heat treatment conditions characterizing the high operating qualities of the

USSR

KUZNETSOV, I. A., et al., Defektoskopiya, No 1, 1971, pp 96-105

parts and products made of 38KhS steel. The conclusion is confirmed that in the case of isothermal quenching only in a narrow temperature range of the isothermal medium, it is possible to obtain sufficiently high values of the impact toughness for the given values of the hardness. The time of isothermal holding should be 10 to 20 minutes. The coercive force, the saturation magnetization, and the reluctivity can be used as the magnetic parameters when controlling parts made of 38KhS steel undergoing isothermal quenching.

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USSR

UDC 678.5:666.189.2:620.176

STRELYAYEV, V. S. and SACHKOVSKAYA, L. L., Moscow Aviation Technology Institute

"Determination of Flow Characteristics in the Destruction Shear of Glass Plastics"

Moscow, Zavodskaya Laboratoriya, Vol 39, No 11, Nov 73, pp 1379-1384

Abstract: The characteristics of shear rupture flow K_{IIc} and G_{IIc} are studied to determine the relationship between the linear mechanics of rupture and the modulus of elasticity. Methods are examined for determining and calculating these reltionships and results are presented from determination of K_{IIc} and G_{IIc} for plane samples of glass plastics P-2-1 and circular samples of glass plastics 27-63s and AG-4s. Statistical analysis of test data showed that the characteristics of destructive shear flow can be determined accurately for plane and circular samples 10-15 mm wide and 3-5 mm thick with notches perpendicular to the reinforcing fibers measuring 5x0.25-1.0 mm. The rupture flow characteristics are invariant in the statistical sense with respect to defect dimensions. Statistical distribution of rupture flow is described by a normal distribution. Four figures, three tables, five bibliographic references.

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1/2 032 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--STATISTICAL EVALUATION OF THE EFFECT OF PRESSING TECHNOLOGY ON THE MECHANICAL PROPERTIES OF FIBERGLASS -U-

AUTHOR-(02)-STRELYAYEV, V.S., TIMOFEYEV, A.F.

5

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, VESTNIK MASHINOSTROYENIYA, NO 2, 1970, PP 42-47

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--FIBERGLASS, PLASTIC MECHANICAL PROPERTY, PRESSURE EFFECT, PLASTIC FABRICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1868 STEP NO--UR/0122/70/000/002/0042/0047

CIRC ACCESSION NO--AP0130695

UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0130695
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OPTIMUM TECHNOLOGICAL REGIMES FOR PRESSING PARTS (CYLINDERS, CONES, AND PLATES) ARE VALIDATED BY THE MULTIFACTOR DISPERSION ANALYSIS METHOD. A DESCRIPTION IS GIVEN OF THE EFFECTS OF PRESSING TEMPERATURE, PRESSURE, AND HOLDING TIME IN THE MOLD ON THE SHORT TERM STRENGTH OF PARTS. AN EVALUATION OF THE MUTUAL EFFECT OF THESE FACTORS IS ALSO GIVEN.

UNCLASSIFIED

Acc. Nr:
AP0045167

Abstracting Service: 5/70
INTERNAT. AEROSPACE ABST.

Ref. Code:
UR3663

A70-22462 # Statistical regularities in the breakdown of oriented fiberglass plastics due to unwinding (Statisticheskie zakonomernosti razrusheniia orientirovannykh stekloplastikov razmotkoi). S. V. Serensen (Gosudarstvennyi Nauchno-Issledovatel'skii Institut Mashinovedeniia, Moscow, USSR) and V. S. Strel'iaev (Moskovskii Aviatsionnyi Tekhnologicheskii Institut, Moscow, USSR). *Problemy Prochnosti*, vol. 2, Jan. 1970, p. 8-18. 13 refs. In Russian.

Analysis of the failure of fiberglass-reinforced composites due to unwinding, using a function of the critical stress distribution. An experimental study is made of the failures in several unidirectionally reinforced fiberglass composites using notched cylindrical samples subjected to an internal pressure.

Z.W.

ALS

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REEL/FRAME
19780067

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1/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--ACETYLATION OF CELLULOSES I AND II WITH A LIMITED DEGREE OF POLYMERIZATION -U-

AUTHOR-(02)-IVANOV, M.A., STRELYUGINA, I.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 929-31

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CELLULOSE, CRYSTALLIZATION, POLYMERIZATION, ANNEALING, ACETATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1947 STEP NO--UR/0080/70/043/004/0929/0931

CIRC ACCESSION NO--AP0132208

UNCLASSIFIED

2/2 029
CIRC ACCESSION NO--AP0132208 UNCLASSIFIED PROCESSING DATE--20NOV70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACETYLATION OF COTTON CELLULOSE, CRYST. MODIFICATION I, FOLLOWED BY ANNEALING OF THE PRODUCTS GAVE THE CRYST. MODIFICATIONS I AND II OF CELLULOSE TRIACETATE. THE SAME PROCEDURE APPLIED TO CELLULOSE CRYST. MODIFICATION II GAVE ONLY CELLULOSE TRIACETATE II. FACILITY: VSES. NAUCH.-ISSLED. INST. TSELLYUL.-BUM. PROM., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 911.3.616.935(470.313)

STRELYUKINA, G. A., and ZAKHAROVA, M. V.

"Some Aims and Results in Control and Prophylaxis Against Dysentery and Acute Intestinal Disease in Ryazanskaya Oblast"

Nauchn. Tr. Ryazansk. med. in-t (Scientific Works of Ryazan Medical Institute) 37, 1970, pp 3-9 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.254 by Ts. Minsbarg)

Translation: In the past 15 years, dysentery morbidity in Ryazan oblast has decreased more than two-fold. In 1966-1968, dysentery morbidity in urban areas was three times that in rural areas. The morbidity dynamics for the whole spectrum of acute intestinal disorders has basically the same morbidity curve as that for dysentery, but exceeds dysentery morbidity over a 15-year period by a factor of approximately 1.5-3. In 1967-1968 the correlation of dysentery and acute intestinal disease decreased to 1 : 1.5-1 : 1. For the past 4 years, Sonne dysentery bacillus has been isolated in 73-94.8% of all dysentery agents. The study of the increase in Sonne dysentery morbidity revealed the significance of the food factor in its transmission. In 1968 as compared to 1958, the number of mild forms of dysentery increased by a factor of more than 3, while the lethality decreased twelve-fold.

USSR

UDC 669.295.046.4

SOROKIN, I. P., STREMILOVA, N. N., MIKHEYEVA, V. V., and CHUMARNYY, V. L.

"Processing the Sinter From Shaft-Type Chlorators"

Sb. tr. Vses. n.-i. i proyektn. in-t titana, [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 140-142, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G181 by the authors).

Translation: Studies are presented on dechlorination of shaft-type chlorinator sinter by moist air in a fluidized bed. The influence of temperature and duration of the process and consumption of moist air on the degree of dechlorination of the sinter is studied. When the process is performed at a temperature of 300-400° using blowing of moist air through the fluidized bed, 75-80% dechlorination can be achieved. Processing of sinter containing 20-30% TiO_2 allows the extraction of Ti in the production of $TiCl_4$ to be increased by 2-2.5%. 2 figures; 1 table.

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USSR

UDC 669.661.42.295

SOROKIN, I. P., STREMILOVA, N. N., MIKHEYEVA, V. V., CHUMARNYY, V. I.

"Reprocessing Sinters From Mine Chlorinators"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol VI, 1970, pp 140-142

Translation: Research was conducted on dechlorinating sinters of mine chlorinators using damp air in a boiling medium. The effect of the process temperature, length of the process, and expenditure of dampened air on the degree of sinter dechlorination was studied. On the basis of laboratory experiments, it was demonstrated that at a process temperature of 300-400°C using blasts of dampened air in a boiling medium, it is possible to achieve 75-80% dechlorination of sinters from mine chlorinators. Reprocessing sinters containing 20-30% titanium dioxide makes it possible to raise the extraction of titanium during the production of titanium tetrachloride by 2-2.5%. Two illustrations and one table.

1/1

1/2 007 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--CONTINUOUS EXTRACTION OF STREPTOMYCIN IN A MULTISECTION COLUMN WITH
A FLUIDIZED BED OF ION EXCHANGER -U-
AUTHOR-(03)-GELPERIN, N.I., KLYUYEVA, L.M., STREMOVSKIY, L.L.

COUNTRY OF INFO--USSR

SOURCE--KHIM. FARM. ZH. 1970, 4(2), 23-6

DATE PUBLISHED-------70

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STREPTOMYCIN, FLUIDIZED BED, ION EXCHANGER/(U)KB2 CATION
EXCHANGER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0326 STEP NO--UR/0450/70/004/002/0023/0026

CIRC ACCESSION NO--AP0113252
UNCLASSIFIED

2/2 007

CIRC ACCESSION NO--AP0113252 UNCLASSIFIED PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WERE CARRIED OUT USING KB-2 CATION EXCHANGER (NA PRIME POSITIVE FORM), STREPTOMYCIN (I) SOLNS. OF THE ACTIVITY RANGE 4000-6500 IU-ML, AND FEEDING RANGE OF I SOLN. 114-410 ML-HR-CM PRIME2. THE OPTIMUM CONDITIONS FOR A CONTINUOUS EXTN. OF I USING A LAB. COLUMN (40 MM IN DIAM.) AND A COUNTERCURRENT INTERACTION OF PHASES WERE AS FOLLOWA: FEEDING RATE 220-40 ML-HR-CM PRIME2, EXPENSE OF FRESH EXHANGER 10-12 G-HR, GRAIN SIZE OF THE EXCHANGER 0.5-0.75 MM, 12 SECTIONS OF THE COLUMN CHARGED WITH THE EXCHANGER, INITIAL CONCN. OF I SOLN. 5000-6000 IU-ML. THE ADVANTAGES OF THE PROCESS ARE THE USE OF 1 COLUMN, REDN. OF THE RESIDENCE TIME OF I IN THE SORBED STATE, HIGH YIELD (SMALLER THAN 97PERCENT) AT THE SATN. OF SIMILAR TO 800,000 IU-G, CONST. CONCNS. OF I IN THE PHASES FED, AND POSSIBILITY OF AUTOMATION OF THE PROCESS. FACILITY: VSES. NAUCH.-ISSLED. INST. ANTIBIOT., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.315.592 ②

AGEKYAN, V. T., ZAKHARCHENYA, B. P., IL'IN, V. V., SEYSYAN, R. P., STEPANOV, Yu. A., and SHIRYAPOV, I. P.

"Exciton Magnetic Absorption in SnO_2 Monocrystals"

Leningrad, Fizika i tekhnika poluprovodnikov, No 10, 1972, pp 1924-1930

Abstract: This article is in the nature of a recapitulation of experimental work on the absorption spectra of various materials in a magnetic field, with the accent on prior papers published by the authors named above. Recent experiments in the spectroscopic examination of germanium testifying to the exciton origin of magnetic absorption oscillations are cited. The authors of the present paper, however, list a number of reasons for using SnO_2 in such experimentation for a magnetic field of more than 10 kOe, arguing that it is uniquely suited for clarifying the role of Coulomb interaction in magnetic absorption oscillation spectra. Referring to an experiment described in an earlier paper they published (Agekyan, V. T., et al, PTE, 2, 182, 1972), using a pulse electromagnet, a liquid helium cryostat, an ISSh-500 pulse lamp, and a DFS-8 spectrograph, they reproduce the basic result of that

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